capable of indicating fifths of a second. During the experiments the subject endeavored to keep himself as much as possible in repose. Ejner himself served as a subject for a large part of the experiments, but a certain number were made on others, including three morbid cases: a neurasthenic, and one each in a maniacal and in depressed condition. His results may be summarized as follows: By the method of single reproductions the estimated time was always too short (least so for the interval of two minutes, both relatively and absolutely); by that of serial reproductions it was too long (most so for the interval of two minutes, absolutely but not relatively), except for the longest interval. The average error by the first method is smaller than by the second in about the proportion of 2 to 3. The average error bears an approximately constant relation to the reproduced interval (not the standard); to this extent the requirements of Weber's Law are fulfilled. The average error is reduced by practice; the estimated time is made shorter by fatigue and longer by practice. The estimation of time depends chiefly on the feelings of inner effort such as accompany the straining of attention on the interval and the like, a result not so far from that of Münsterberg (cf. this JOURNAL, Vol. III, p. 130). In the psychopathic cases the time estimates were less accurate. In a few experiments, made by the method of serial reproduction on a normal subject with intervals of 0.5 and 4 minutes, a metronome was allowed to tick at the rate of 200 per minute, or the subject performed a somewhat elaborate process in mental arithmetic. These showed a greater regularity of estimate than before, and the estimated time was shorter, especially for the shorter interval. The author fails to make mention of the work of Stevens (*Mind*, Oct., 1886), who likewise approached the problem by the method of multiple reproduction, though using shorter intervals.

III.—MORBID PSYCHOLOGY.

RECENT DISCUSSIONS ON PSYCHIATRIC CLASSIFICATION AND NOMENCLATURE.

BY WILLIAM NOYES, M. D.

Katatonia. MM. T. SÉGLAS and PH. CHASLIN. Brain, July, 1889. (From Archives de Neurologie.)

Séglas and Chaslin have contributed a valuable critical paper on the history of Katatonia, and have summed up our knowledge of this vexed subject fairly and justly. Kahlbaum's monograph, *Die Katatonie* appeared in 1874, and since then there has been much division of opinion, as to whether he had really described a new disease or only a group of symptoms. Kahlbaum tried to define a form of disease in which certain physical, and particularly muscular symptoms accompany (as in general paresis, and as frequently) certain psychical phenomena, and play a leading part in the whole morbid closely process. This new form of mental derangement may be allied to melancholia attonita, which is ordinarily considered a distinct disease. On careful examination of the latter disease, we can very often, according to Kahlbaum, discover at the onset, epileptiform seizures or other manifestations of spasmodic attacks. These conditions become permanent, attain their greatest development in the *flexibilitas cerea* stage of the mental condition, and merge into the final stage of dementia. These symptoms are by their importance placed in a line with the paralytic phenomena of general paralysis. By their side, and in addition to the usual symptoms of melancholia attonita, we find other physical, and more especially psychical phenomena, notably a particu-

lar form of exaltation, which may be termed "*pathetic estasy*," as well as a tendency to speak as if discoursing or to recite, which gives a characteristic physiognomy to the disease. All these symptoms constitute what is called Katatonia, and up to a certain point this form of disease should be considered as a counterpart to certain forms of general paralysis with or without grandiose delusions. Analogous to general paralysis as regards the succession of different psychical phenomena in connection with the muscular symptoms, they seem to differ from it, on the contrary, by the quality of the muscular and psychical manifestations, and consequently a marked difference is to be found in the prognosis. Those who have recorded themselves in favor of the entity of the disease are Hecker, Kiernan, Hammond, Spitzka, Neuendorf, Neisser, and Schüle; while Arndt, Westphal, Tigges, Von Rinecker, and Krafft-Ebing entirely oppose the conception. The first group claim that it is an essential morbid form; the second that the cases classed under that name are only variations of types already known and described. Amongst the characters given as pathognomonic, of chief importance, are placed katatonic phenomena of the most varied nature: the pathetic attitude, stereotyped gestures, verbigeration, marked obstinacy (often systematic), and finally the cyclic course of the disease. Are these katatonic phenomena, as well as others mentioned before, really characteristic of a special form of mental disease? After considering this question with care, and studying the phenomena in degenerative conditions, our authors conclude that katatonic phenomena, taken singly, have nothing to characterize them, for they are found in a multitude of mental affections. Apart from accidental motor disorders, such as spasms or contractions, which one may meet outside mental diseases properly speaking, there are motor disorders which belong specially to insanity, and which can be present in the most varied forms of mental disease, divided by Morselli into states of increased reflex excitability of the muscles (tetany), increased muscular tonicity, (catalepsy,) and states of abnormal distribution of central motor impulses, (such as stiffness at the beginning of a movement). Consequently we may say with Arndt that the insanity of tonicity (*Spannungs-Irresein*) is not a disease, but may develop itself upon the most diverse grounds, and under the most varied conditions; and further considering them only in the cases called Katatonia, their mode of development, course and relations with the other symptoms, have nothing to specify them, and they present no regular characteristics. Other katatonic symptoms, verbigeration, dumbness, stereotyped gestures, pathetic attitudes and systematized resistance, are equally proved not to be specially characteristic of Katatonia; and neither does the course of the disease, called cyclic, offer anything characteristic, for the variable conditions through which the disease passes have nothing regular in their mode of appearing or in their relative positions. The stages in the cycle of Katatonia show nothing but what is known to occur in many other diseases. Kahlbaum himself recognizes "that mental diseases in general, including Katatonia, begin with melancholia, pass into mania, next into *Verwirrtheit*, and finally end in dementia," and in another place he says, "Melancholia attonita, which has been considered until now as a special form of disease, *develops itself primarily in very rare cases;* it pursues in general rather a course of simple melancholia, or a condition of melancholia following mania in such a manner that the melancholia attonita is the third stage of the complete process which terminates in recovery or dementia."

To sum up: Isolated, not one of the symtoms reviewed can by itself characterize a special psychopathic form of disease. Is it otherwise with them when considered *in toto?* In short, in order that a union of symptoms not characteristic in themselves may constitute an essential pathological entity, it is necessary that they possess among themselves

close relations with regard to their nature, origin, mode of succession and causation, in such a manner that notwithstanding their inevitable variations, one can always grasp their relations, recognize their connections, and refer them to a defined primitive type, and to a common superior cause. We do see a co-existence in the description of Katatonia, but not an association or a combination of symptoms.

The etiological causes which Kahlbaum gives are perfectly commonplace ones, and such as we may find at the source of all possible forms of mental disease. There are, however, two causes, not mentioned by Kahlbaum, which in the opinion of Séglas and Chaslin might induce a special predisposition and serve to characterize the foundation on which the disease develops itself; these are degeneration in general and the hysterical state. Séglas and Chaslin, from a study of the cases, feel justified in asserting that these factors have been overlooked by the advocates of Katatonia. Finally, they complete their study by saying that Kahlbaum's attempt does not seem to them so far sufficiently justified; and they repeat with regard to Katatonia what has been said of catalepsy, namely, that in the description of this affection, some authors have coupled together facts which, from different points of view, are dissimilar; and that they have rather recorded the history of a symptom, (or better, of a "syndrome,") than of a veritable disease.

If we consider further that from the physical point of view the prominent symptom is the presence of disturbance of the neuro-motor functions, while the principal psychical feature is a more or less acute condition of melancholia, (the other symptoms, progress, etc., presenting nothing special,) the opinion must be formed that for the present Katatonia must be classed under the general group of stupors—simple or symptomatic—of which it may only be a variety more closely connected with a degenerative and more particularly hysteric ground. This conclusion, the authors add, is not an explanation, but it is to their mind the only opinion which can be formulated in the present state of science.

Ueber Heboïdophrenie. DR. KAHLBAUM. Allgem. Zeitsch. f. Psychiat. Bd. XLVI, H. 4, 1889.

Kahlbaum's conception of *Hebephrenia* has been before the psychiatric world since 1870, (Virchow's Archiv, Bd. 52) and after 20 years he now puts forward a claim for a separate position in classification for a second form of the insanity of pubescence, under the name of Heboïdophrenia. Before discussing this second form, it may not be improper to review the position assigned to Hebephrenia by Kahlbaum's fellow alienists.

Krafft-Ebing, (Lehrbuch, 3d Edition, 1888, p. 162) in discussing the Causes of Insanity, gives the influence of the time of life, and concludes his review of the influence of puberty by citing the group of symptoms called hebephrenia by Kahlbaum, and sums up as follows: "The right to put forward hebephrenia as a separate form of disease, seems to me to be questionable," and he quotes Schüle as finding only two cases of pure hebephrenia among 600 patients, while he himself in 3000 found only 8, and in all of these there was hereditary predisposition, original imbecility, and signs of degeneration; two were microcephalic. The only case he cites has the heading "Maniacal insanity in puberty with hebephrenic symptoms."

Schüle (Handbuch, 1886, p. 508) places hebephrenia under Idiocy, of which he makes six types, the last being the type Hebephrenic Imbecility—"the true hebephrenia, the pubetic insanity, as it has been designated by Kahlbaum and Hecker, may find its place here, although it does not always develop on a basis of idiocy, yet in the great majority of cases leads to a persistent imbecility."

Kraepelin, (Psychiatrie, 1889, p. 52,) under general etiology, simply states that one of the frequent clinical pictures of psychical disturbances